

Week 6 Homework: Economic Growth and Income Disparity

Write your answers in the space provided or on your own paper. When you have finished, scan or take pictures of your work, combine all images to a single PDF file, assure that all pictures are oriented right-side up, and upload your work as a single PDF file to the Canvas Assignment area. You may use <https://online2pdf.com/> to combine your images to a single PDF file.

1. Use the Solow growth model to demonstrate how differences in access to technology can cause highly-developed countries and lesser-developed countries to both grow at low rates and never converge. Include in your answer a description of the differences in access to technology and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

2. Use the Solow growth model to demonstrate how differences in population growth rates can cause highly-developed countries and lesser-developed countries to both grow at low rates and never converge. Include in your answer a description of the differences in population growth rates and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

3. Use the Solow growth model with increasing returns at low levels of capital to demonstrate how highly-developed countries and lesser-developed countries converge to very different long-run steady state levels. Include in your answer a description of the marginal product of capital and illustrations of the consequences for long-run capital stock per worker, long-run output per worker, and the time paths of output per worker from the short-run to the long-run.

4. Use the human capital growth model to demonstrate how differences in investment in education and training can cause highly-developed countries and lesser-developed countries to grow at different rates and never converge. Include in your answer a description of the differences in education/training and illustrations of the differences in the paths for human capital accumulation and output-per worker.